

SEQUENCE LISTING

<110> Matsui, Takeshi
Kisumi, Fumie
Kinoshita, Yoko

<120> NOVEL GENE PARTICIPATING IN EPIDERMAL
DIFFERENTIATION AND USE THEREOF

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<150> PCT/JP2005/03458

<151> 2005-03-02

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<170> PatentIn version 3.1

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| cag aat gaa ggg tgc acg aat ccc cca cca tct ggc tca ggt gga ggc Gln Asn Glu Gly Cys Thr Asn Pro Pro Pro Ser Gly Ser Gly Gly Gly 225 230 235 240 | 897 |
| tcc agc aac tct ggg gga ggc agc ggc tca cag tcc ggc agc agt ggc Ser Ser Asn Ser Gly Gly Gly Ser Gly Ser Gln Ser Gly Ser Ser Gly 245 250 255 | 945 |
| agt ggc agc aat ggt gac aac aac aat ggc agc agc agt ggt ggc agc Ser Gly Ser Asn Gly Asp Asn Asn Asn Gly Ser Ser Ser Gly Gly Ser 260 265 270 | 993 |
| agc agt ggc agc agc agt ggc ggc agc agt ggc ggc agc agt ggt ggc Ser Ser Gly Ser Ser Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Gly 275 280 285 | 1041 |
| agc agt ggc aac agt ggt ggc agc aga ggt gac agc ggc agt gag tcc Ser Ser Gly Asn Ser Gly Gly Ser Arg Gly Asp Ser Gly Ser Glu Ser 290 295 300 | 1089 |
| tcc tgg gga tcc agc acc ggc tcc tcc tcc ggc aac cac ggt ggg agc Ser Trp Gly Ser Ser Thr Gly Ser Ser Ser Gly Asn His Gly Gly Ser 305 310 315 320 | 1137 |
| ggc gga gga aat gga cat aaa ccc ggg tgt gaa aag cca ggg aat gaa Gly Gly Gly Asn Gly His Lys Pro Gly Cys Glu Lys Pro Gly Asn Glu 325 330 335 | 1185 |
| gcc cgc ggg agc ggg gaa tct ggg att cag aac tct gag acg tct cct Ala Arg Gly Ser Gly Glu Ser Gly Ile Gln Asn Ser Glu Thr Ser Pro 340 345 350 | 1233 |
| ggg atg ttt aac ttt gac act ttc tgg aag aat ttt aaa tcc aag ctg | 1281 |

| | | | | | | | | | | | | | | | | |
|------------|------------|------------|-------------|------------|-------------|-----|-----|-----|-----|-----|-----|-----|------------|-----|-----|------|
| Gly | Met | Phe | Asn | Phe | Asp | Thr | Phe | Trp | Lys | Asn | Phe | Lys | Ser | Lys | Leu | |
| | | 355 | | | | | 360 | | | | | 365 | | | | |
| ggt | ttc | atc | aac | tgg | gat | gcc | ata | aac | aag | aac | cag | gtc | ccg | ccc | ccc | 1329 |
| Gly | Phe | Ile | Asn | Trp | Asp | Ala | Ile | Asn | Lys | Asn | Gln | Val | Pro | Pro | Pro | |
| | 370 | | | | | 375 | | | | | 380 | | | | | |
| agc | acc | cga | gcc | ctc | ctc | tac | ttc | agc | cga | ctc | tgg | gag | gat | ttc | aaa | 1377 |
| Ser | Thr | Arg | Ala | Leu | Leu | Tyr | Phe | Ser | Arg | Leu | Trp | Glu | Asp | Phe | Lys | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | |
| cag | aac | act | cct | ttc | ctc | aac | tgg | aaa | gca | att | att | gag | ggt | gcg | gac | 1425 |
| Gln | Asn | Thr | Pro | Phe | Leu | Asn | Trp | Lys | Ala | Ile | Ile | Glu | Gly | Ala | Asp | |
| | | | 405 | | | | | 410 | | | | | | 415 | | |
| gcg | tca | tca | ctg | cag | aaa | cgt | gca | ggc | aga | gcc | gat | cag | aac | tac | aat | 1473 |
| Ala | Ser | Ser | Leu | Gln | Lys | Arg | Ala | Gly | Arg | Ala | Asp | Gln | Asn | Tyr | Asn | |
| | | | 420 | | | | | 425 | | | | | | 430 | | |
| tac | aac | cag | cat | gcg | tat | ccc | act | gcc | tat | ggt | ggg | aag | tac | tca | gtc | 1521 |
| Tyr | Asn | Gln | His | Ala | Tyr | Pro | Thr | Ala | Tyr | Gly | Gly | Lys | Tyr | Ser | Val | |
| | | 435 | | | | | 440 | | | | | 445 | | | | |
| aag | acc | cct | gca | aag | ggg | gga | gtc | tca | cct | tct | tcc | tcg | gct | tcc | cgg | 1569 |
| Lys | Thr | Pro | Ala | Lys | Gly | Gly | Val | Ser | Pro | Ser | Ser | Ser | Ala | Ser | Arg | |
| | 450 | | | | | 455 | | | | | 460 | | | | | |
| gtg | caa | cct | ggc | ctg | ctg | cag | tgg | gtg | aag | ttt | tgg | tag | gcaatttctt | | | 1618 |
| Val | Gln | Pro | Gly | Leu | Leu | Gln | Trp | Val | Lys | Phe | Trp | | | | | |
| 465 | | | | | 470 | | | | | 475 | | | | | | |
| gcaaccacca | ccgaggcccc | gaaaagcact | ggtcgtcagg | gagctcctcc | ccttggtcccc | | | | | | | | | | | 1678 |
| cagcctgtgc | cagccctggc | ccggctgcca | cacctctgtt | tcctaggctg | gggaccacgc | | | | | | | | | | | 1738 |
| ttgtctctcc | ttgtttcttc | ccactgcact | gtgggtgcttc | agtggccacc | agcctcgta | | | | | | | | | | | 1798 |
| catacaccag | catctttctg | tacctcctcc | ctttggtgac | ctgaagtcac | tgtgacagtt | | | | | | | | | | | 1858 |
| ctccaggaag | gaggagcttc | ctacttttga | gtttctctgt | ggaaataaaa | catgaatctt | | | | | | | | | | | 1918 |
| gtttccctaa | aaaaaaaaaa | aaaaaaaaaa | aaaaaaaaaa | aaaaaaaaaa | aaaaaaaaaa | | | | | | | | | | | 1978 |
| aaaa | | | | | | | | | | | | | | | | 1982 |

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 Thr Asn Ile Gly Glu Ala Leu Gly His Gly Leu Gly Asp Ala Leu Ser
 35 40 45

Glu Gly Val Gly Lys Ala Ile Gly Lys Glu Ala Gly Gly Ala Ala Gly
 50 55 60
 Ser Lys Val Ser Glu Ala Leu Gly Gln Gly Thr Arg Glu Ala Val Gly
 65 70 75 80
 Thr Gly Val Arg Gln Val Pro Gly Phe Gly Ala Ala Asp Ala Leu Gly
 85 90 95
 Asn Arg Val Gly Glu Ala Ala His Ala Leu Gly Asn Thr Gly His Glu
 100 105 110
 Ile Gly Arg Gln Ala Glu Asp Val Ile Arg His Gly Ala Asp Ala Val
 115 120 125
 Arg Gly Ser Trp Gln Gly Val Pro Gly His Asn Gly Ala Trp Glu Thr
 130 135 140
 Ser Gly Gly His Gly Ile Phe Gly Ser Gln Gly Gly Leu Gly Gly Gln
 145 150 155 160
 Gly Gln Gly Asn Pro Gly Gly Leu Gly Thr Pro Trp Val His Gly Tyr
 165 170 175
 Pro Gly Asn Ser Ala Gly Ser Phe Gly Met Asn Pro Gln Gly Ala Pro
 180 185 190
 Trp Gly Gln Gly Gly Asn Gly Gly Pro Pro Asn Phe Gly Thr Asn Thr
 195 200 205
 Gln Gly Ala Val Ala Gln Pro Gly Tyr Gly Ser Val Arg Ala Ser Asn
 210 215 220
 Gln Asn Glu Gly Cys Thr Asn Pro Pro Pro Ser Gly Ser Gly Gly Gly
 225 230 235 240
 Ser Ser Asn Ser Gly Gly Gly Ser Gly Ser Gln Ser Gly Ser Ser Gly
 245 250 255
 Ser Gly Ser Asn Gly Asp Asn Asn Asn Gly Ser Ser Ser Gly Gly Ser
 260 265 270
 Ser Ser Gly Ser Ser Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Gly
 275 280 285
 Ser Ser Gly Asn Ser Gly Gly Ser Arg Gly Asp Ser Gly Ser Glu Ser
 290 295 300
 Ser Trp Gly Ser Ser Thr Gly Ser Ser Ser Gly Asn His Gly Gly Ser
 305 310 315 320
 Gly Gly Gly Asn Gly His Lys Pro Gly Cys Glu Lys Pro Gly Asn Glu
 325 330 335
 Ala Arg Gly Ser Gly Glu Ser Gly Ile Gln Asn Ser Glu Thr Ser Pro
 340 345 350
 Gly Met Phe Asn Phe Asp Thr Phe Trp Lys Asn Phe Lys Ser Lys Leu
 355 360 365
 Gly Phe Ile Asn Trp Asp Ala Ile Asn Lys Asn Gln Val Pro Pro Pro

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 370 | | | | | 375 | | | | | 380 | | | | | |
| Ser 385 | Thr | Arg | Ala | Leu | Leu 390 | Tyr | Phe | Ser | Arg | Leu 395 | Trp | Glu | Asp | Phe | Lys 400 |
| Gln | Asn | Thr | Pro | Phe 405 | Leu | Asn | Trp | Lys | Ala 410 | Ile | Ile | Glu | Gly | Ala 415 | Asp |
| Ala | Ser | Ser | Leu 420 | Gln | Lys | Arg | Ala | Gly 425 | Arg | Ala | Asp | Gln | Asn 430 | Tyr | Asn |
| Tyr | Asn | Gln 435 | His | Ala | Tyr | Pro | Thr 440 | Ala | Tyr | Gly | Gly | Lys 445 | Tyr | Ser | Val |
| Lys | Thr 450 | Pro | Ala | Lys | Gly | Gly 455 | Val | Ser | Pro | Ser | Ser 460 | Ser | Ala | Ser | Arg |
| Val 465 | Gln | Pro | Gly | Leu | Leu 470 | Gln | Trp | Val | Lys | Phe 475 | Trp | | | | |

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<220>
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<210> 50
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<220>
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<210> 52
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<220>
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<210> 53
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 Gln Lys Arg Ala Gly Gly Ala Asp Gln Phe Ser Lys Pro Glu Ala Arg
 35 40 45
 Gln Asp Leu Ser Ala Asp Ser Ser Lys Asn Tyr Tyr Asn Asn Gln Gln
 50 55 60
 Val Asn Pro Thr Tyr Asn Trp Gln Tyr Tyr Thr Lys Thr Thr Ala Lys
 65 70 75 80
 Ala Gly Val Thr Pro Ser Ser Ser Ser Ala Ser Arg Ala Gln Pro Gly
 85 90 95
 Leu Leu Lys Trp Leu Lys Phe Trp
 100